

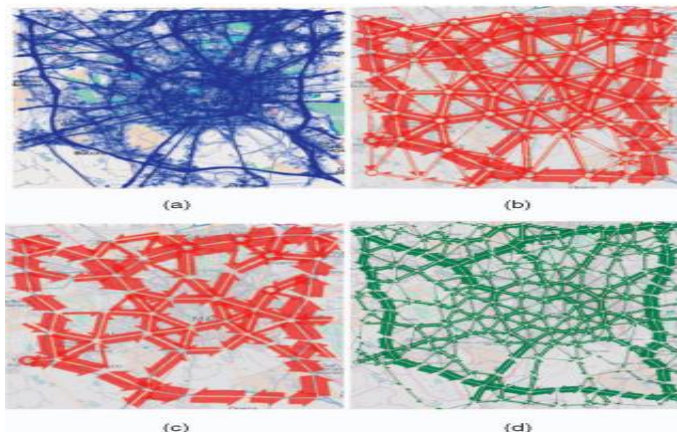
This week:

- I prepare the PPT and report for the course.(Monday)
- Write the blog for the paper “SemanticTraj: A New Approach to Interacting with Massive Taxi Trajectories” which list in the web
- Use the index to organize the data in database. I try B-tree at the first time. Estate, POIs and blog data are already to query in the system. And the query time is on the interaction level. But for the taxi trajectory data, it is a large dataset, and use this kind of index can’t achieve interaction level query. So I decide to build STC or use quadtree in MySQL. For the former one, I want to achieve in the next week.

```
mysql> show index from taxi_traj
->
```

Table	Non_unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality	Sub_part	Packed	Null	Index_type	Comment
taxi_traj	0	PRIMARY	1	idTaxi_traj	A	361375616		NULL	NULL	BTREE	
taxi_traj	1	taxi_name_index	1	Taxi_name	A	473031		NULL	NULL	YES	BTREE
taxi_traj	1	taxi_geo_index	1	latitude	A	1769272		NULL	NULL	YES	BTREE
taxi_traj	1	taxi_geo_index	2	longitude	A	25363056		NULL	NULL	YES	BTREE
taxi_traj	1	taxi_time_index	1	time	A	2531867		NULL	NULL	YES	BTREE
taxi_traj	1	taxi_speed_index	1	speed	A	65450		NULL	NULL	YES	BTREE
taxi_traj	1	taxi_geotime_index	1	latitude	A	1221627		NULL	NULL	YES	BTREE
taxi_traj	1	taxi_geotime_index	2	longitude	A	19331398		NULL	NULL	YES	BTREE
taxi_traj	1	taxi_geotime_index	3	time	A	361375616		NULL	NULL	YES	BTREE

- Coding the query function using MySQL, identify the query condition and transform it into sequence. This function can also be used in the semantics transform. (use 2 days)
- Temple demo: achieve the frame of the project, and rendering the map as well as the box selection, and put the POIs data on the map.
- Reading paper:
 1. Spatial Generalization and Aggregation of Massive Movement Data



本文利用区域的划分方法，把整个城市划分成不同的区域，然后用轨迹数据来计算每一个区域之间的车流量信息，并把车流量的大小编码到剪头的宽度上，完成了对于城市主要通勤道路，交通流量的可视化，我们的寺庙项目中的车流分析可以参考这一方法。

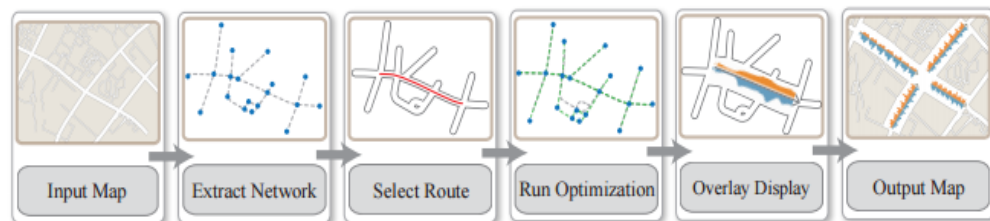
2. Making Sense of Trajectory Data: A Partition-and-Summarization Approach



The car started from the Beijing Exhibition Center and moved along Zizhuyuan Street passing by the Beijing Shangri-la Hotel. Then it moved from the Beijing Shangri-la Hotel to the Yuyuantan Park along W 3rd Ring Road Middle highway. Along this road the speed of the car is 15 km/h which is 14km/h slower than usual.

本文的主要工作是对出租车的轨迹进行语义赋予，总结某一条轨迹所经过的所有的街道，速度，然后他所经过的主要的 POI 数据。完成对轨迹的语义信息分析。从而用户能够阅读文字来总结轨迹的大致情况。

3. Embedding Spatio-temporal Information into Maps by Route-Zooming



本文的交互工作十分有趣，它主要的研究是想在放大所选区域的同时使得所有周围的东西变化的更少，以前我的想法是通过鱼眼视图来完成这种 detail 的交互要求，但是这个工作的方法是在把目标道路放大的同时去完成对其他道路的变形操作，我想在以后的文章中可以应用，可以在这几周可以找一个本科生实现这个代码。变成一个 function，方便同组其他同学调用。

- 此外我和本科同学的面试等也在进行，我的计划是想找 1 个同学把 VAUD 大

屏剩下的查询页面的设计实现。然后找 2 个新同学完成 demo。一个对界面进行编码，另一个实现聚类算法。

- Ask Zongzhuang to complete document of the knowledge graph, and find a few points which can be combined with our work. Next week to discuss this. This is the work of the data system using knowledge graph. I'm Still thinking about this.....

Next week:

Demo

Discuss